

ABSTRACT OF THE DISCLOSURE

A leak detector comprising a sensor unit including a measuring slim-tube (13b) via the lower end of which a liquid in a tank is led in/out, a measuring tube (17) connected to the upper end thereof and having a sectional area larger than that thereof, and temperature sensors (133, 134) and a heater (135) provided to the slim-tube (13b), and a leak detection control unit (15a) connected to the sensor unit. The leak detection control unit (15a) has a pulse voltage generating circuit for applying a single pulse voltage to the heater (135) and a leak detecting circuit that is connected to the temperature sensors (133, 134) and produces an output equivalent to a temperature difference sensed by these temperature sensors, whereby a value equivalent to a liquid flow rate is calculated by integrating the difference between an output from the leak detecting circuit and its initial value according to a single pulse voltage applied to the heater (135) by the pulse voltage generating circuit, and leakage of liquid from the tank is detected based on this value.